

\* NOTICES \*

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

## DETAILED DESCRIPTION

---

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention by blending "the ancient salt water" which includes a minute amount mineral required for healthy maintenance of human bodies including a mineral element especially calcium, and magnesium with sufficient balance so much as a natural mineral ingredient, Balance [ calcium / the mineral ingredient which tends to be insufficient in general eating habits, especially ] is good, By being able to take in simple and effectively, and also using the outstanding reducing power which only the ancient salt water which cannot be obtained from other groundwater, sea water, deep sea water, etc. may reveal, It is related with the foodstuffs and the drink using the food additive and this which can control remarkably the superfluous occurrence prevention of active oxygen in a human body, and the freshness fall of food.

Therefore, the Alzheimer type dementia to which especially this invention originates in the shortage of a mineral, Parkinson's disease, diabetes mellitus, arteriosclerosis, cardiopathy, hypertension, cerebral infarction, ischemic heart disease, It is related with the foodstuffs and the drink which added the food additive and this which demonstrate various diseases including the cancer resulting from prevention of cerebral hemorrhage, osteoporosis, a headache, stress, urolith, arrhythmia, sudden death, or liver disease, and superfluous generating of active oxygen, etc. and a degraded phenomenon, and the still more remarkable effect to control of a freshness fall of food.

[0002]

[Description of the Prior Art]The eating habits are a variety large quantity, and, so that it becomes very rich [ the Japanese eating habits in the present ] and is bantered from "gluttony Japan" and many foreign countries by postwar economical development these days, The so-

called increase in "adult diseases (lifestyle-related disease)", such as obesity by superfluous ingestion of energy (calorie), protein, a fat, etc., etc., hypertension, diabetes mellitus, gout, and arteriosclerosis, is posing people and a national problem.

[0003]However, even if such "gluttony Japan" has, it is one of a mineral element and the nutrients which there is little intake as compared with many advanced foreign countries, and are not filling the required requirements of the day in particular about calcium.

[0004]In life activity, calcium is indispensable and with shortage of the intake of this calcium. The dyschylia of parathyroid hormone and hardening of the elastic fiber (elastin) which constitutes the blood vessel are caused, The Alzheimer type dementia, Parkinson's disease, diabetes mellitus, arteriosclerosis, cardiopathy, Hypertension, cerebral infarction, ischemic heart disease, the cerebral hemorrhage, osteoporosis, a headache, stress, It is said that it also becomes a cause which causes pneumonia, emotional turmoils, etc., such as an agitation of not only causing various diseases and adult diseases (lifestyle-related disease), such as urolith, arrhythmia, sudden death, or liver disease, but atopy, allergy and muscles, or a nerve, a muscular spasm, irritation, and persecution delusion.

[0005]Although the required requirements of the calcium which Ministry of Health and Welfare presents are set as 600 mg of days by the adult, now, Although this figure is only the quantity of about 50 to 80 percent as compared with many advanced foreign countries, an average Japanese's about 90 more% of this figure amount of calcium ingestion is taken in, but especially the shortage of calcium has become the shortage of mineral ingestion of Japanese people, and a serious situation.

[0006]By the way, what is called "an adult disease (lifestyle-related disease)" and a "degraded phenomenon", Not a thing but above-mentioned energy and protein of getting worse suddenly one day, In addition to the shortage of ingestion of the mineral by superfluous ingestion and an unbalanced diet of a fat etc., etc., the pile of the contents of a life of every day, such as ultraviolet rays, alcohol, and excessive drinking of tobacco, serves as a base, and the ground which the degraded phenomenon of the onset of an adult disease (lifestyle-related disease), wrinkles, silverfish, etc. reveals is done.

[0007]Namely, although superfluous ingestion of such energies, protein, a fat, etc., etc., an unbalanced diet or alcohol, excessive drinking of tobacco, etc. have an adverse effect on the health of the body and promoting aging or becoming a sick basis is known well experientially from before, In what kind of form it leads to pathopoiesis of an adult disease (lifestyle-related disease) or promotion of aging had many points obscure till these days.

[0008]By the latest research, it turns out very much that the radical and activation lipid of active oxygen are closely concerned with these adult diseases (lifestyle-related disease) and degraded phenomena.

Controlling superfluous generating of this active oxygen and accumulation of peroxylipid

delayed aging as a result, it maintained youth, and influencing greatly the onset and recovery of an adult disease (lifestyle-related disease) is known.

[0009]Although active oxygen is the substance which was dramatically rich in reactivity and it is said that 2% of the oxygen incorporated into the living body by breathing turns into active oxygen, Usually, the function in which enzymes, such as "a SOD enzyme (superoxide DIMUSUTAZE)" etc. which makes the radical of active oxygen harmless, will go up in the inside of the body if a quantity of this amount of active oxygen occurs in the living body, "SOD induction ability" works and it controls that active oxygen and peroxy lipid are accumulated in the living body.

[0010]By however, external factors, such as ingestion of excessive movement and labor, alcohol, tobacco, medicine, etc., bacterial infection, stress, and ischemia. When active oxygen carries out superfluous generating above for a regular amount in the living body, only by said SOD induction function, it becomes impossible to fully detoxicate the radical of active oxygen, and active oxygen will be accumulated superfluously in the living body.

[0011]As a result, the body tissue which has unstable chemical structure, such as unsaturated fatty acid containing the collagenous fiber which determines the pliability and elasticity of the skin, elastin textiles, or the phospholipid which exists in the inside of a living body cell, becomes a radical target of active oxygen, and oxidizes.

[0012]And if these collagenous fibers, elastin textiles, and phospholipid carry out conversion, It becomes peroxy lipid, and it accumulates, and becomes wrinkles and a cause of generating of silverfish in the skin, and peroxy lipid destroys a normal cell also in an organ in the living body, an obstacle is done to an organ, and becoming various sick causes is pointed out.

[0013]Thus, active oxygen destroys a collagenous fiber, elastin textiles, phospholipid, etc., and further, promote aging, it becomes various sick causes, and also accumulation of peroxy lipid will damage intracellular DNA, and also becomes the cause of generating cancer.

[0014]Therefore, the Alzheimer type dementia, Parkinson's disease, diabetes mellitus, arteriosclerosis, Cardiopathy, hypertension, cerebral infarction, ischemic heart disease, the cerebral hemorrhage, osteoporosis, a headache, Most of various diseases, such as adult diseases (lifestyle-related disease), such as stress, urolith, arrhythmia, sudden death, or liver disease, cancer resulting from superfluous generating of active oxygen, and aging, If it has been said that it is in the shortage of ingestion of a mineral and superfluous generating of active oxygen and it says conversely, it will lead to control of these critical disease generating by controlling efficient ingestion of a mineral element, especially calcium, the superfluous occurrence prevention of active oxygen, and accumulation of peroxy lipid.

[0015]

[Problem(s) to be Solved by the Invention]However, calcium is an ingredient whose absorption

efficiency is not so high from the first, For example, cow's milk, dairy products, etc. which are said for absorption efficiency to be the highest about 10 to 30% with the usual foodstuffs, Even if it takes in foodstuffs, a drink, etc. which added the calcium which has only an absorptivity of about 50%, will be excreted, without incorporating into the inside of the body the great portion of calcium contained in foodstuffs, therefore is generally circulating in the commercial scene, it is difficult to acquire a big effect.

[0016]When calcium is taken in superfluously conversely, blood and intracellular calcium concentration increase, side effects, such as a superfluous fall of nervous excitability, muscular relaxation, or depression, occur, and there is also a possibility of occasionally producing to disturbance of consciousness.

[0017]Namely, even if it is dramatically difficult to be efficient on a human body and to incorporate calcium into it in proper quantity and only takes in a calcium diet article, a drink, etc. which are marketed now ordinarily, there is an effect's hardly being acquired and a possibility that the aforementioned side effects may occur by taking in the calcium diet article of the present marketing, etc. positively (superfluously) conversely, and moderate ingestion of calcium is a problem very difficult for the general public in this point.

[0018]On the other hand, about prevention of superfluous generating and accumulation of active oxygen. Antioxidants, such as antioxidative vitamin mostly contained in deep yellow vegetables etc., such as vitamin B2, vitamin C, and vitamin E, carotene, flavonoid, tannin, polyphenol, are positively incorporated into the inside of the body, active oxygen carries out free radical reduction, and it is reported to be good to detoxicate.

[0019]However, human being's body has individual difference and individual difference, respectively, and the quantity of production of a SOD enzyme in the living body constitutionally few persons, Although said antioxidative vitamin and an antioxidant are incorporated positively, if the oxidation with sufficiently strong active oxygen cannot be inhibited and it usually becomes at the 40th generation time, the activity power of a SOD enzyme will decline quickly and will become difficult to oppose active oxygen and activation lipid.

[0020]These days, the "SOD pharmaceutical preparation" as injections, and an AGARISUKU mushroom, a soybean, \*\* -- or "the plant fermentation extraction extract (SOD similar foodstuffs)" which extracted SOD allied substances and an antioxidant from the natural product of brown rice etc. is developed, and it has been observed noting that it is effective in various kinds of diseases, such as an adult disease (lifestyle-related disease) and a blood flow obstruction.

[0021]However, as described above, generate active oxygen by daily life activity, but. Even so, for ordinary persons, cannot inject expensive SOD pharmaceutical preparation every day, and SOD similar foodstuffs, such as a plant fermentation extraction extract, Active principles, such as SOD allied substances and an antioxidant, are extracted from a natural product, and there

is a fault that it is expensive since it is necessary to perform special processing so that it may not be destroyed in the stomach and intestines, and the antioxidant action also has variation by people.

[0022]Thus, it is efficient on a human body, and a mineral element, especially calcium can be incorporated into it in proper quantity, And the development for providing cheaply food constituents which reveal the reducing action which can fully inhibit the strong oxidation of active oxygen, such as a food additive, foodstuffs, and a drink, is not made at present.

[0023]The result of having repeated examination wholeheartedly in order that this invention person might solve said technical technical problem, The food additive which blends the ancient salt water closed in the underground depths as a mineral ingredient, And the foodstuffs and the drink using this were efficient on the human body in a mineral element, especially calcium, and acquired knowledge that it can grow into the food constituent which can incorporate a proper quantity and can fully inhibit the strong oxidation of active oxygen.

[0024]About 70 sorts contain the mineral element which needs ancient salt water for life activity with sufficient balance, and the underground depths over the long period of time also of tens of thousands of especially Namely, since [ for example, ] it was closed by coral reef porous Naka, Many MIRURARU ingredients and various subterranean MIRURARU ingredients, such as a calcium element, were eluted from the coral reef, and the knowledge of containing very many MIRURARU ingredients, such as calcium, as compared with other groundwater, sea water, or deep sea water was acquired.

[0025]Since the magnesium element is also contained so much in this ancient salt water, When this ancient salt water is made into a food constituent etc. and incorporated in the living body, in in the living body, an antagonistic operation of magnesium and calcium is revealed, The ingestion efficiency of calcium was raised, moreover the side effects by calcium entering superfluously to intracellular were inhibited, and the knowledge that adequate intake of the calcium could be carried out safely and simple was also acquired.

[0026]furthermore -- said -- as carried out, this ancient salt water was closed in the underground depths over the long period of time also of tens of thousands of, [ sake and ] Do not contact the interspace mind (oxygen) or light for tens of thousands of years, but, as a result, generating of microorganisms, such as saprophytic bacteria and bacteria, is controlled, From it having been in contact with neither oxygen nor light under mild fixed environment (around 20 \*\*) very purely. It compares with the mineral ingredient which the mineral element in this ancient salt water does not oxidize at all, and exists with a very activity state, therefore is contained in other groundwater, sea water, or deep sea water, The knowledge that a remarkable high reducing action (outstanding reducing power) was shown to the substance of an oxidizing quality was also acquired.

[0027]Since the ancient salt water concerned was closed in the underground depths over the

long period of time also of tens of thousands of as for the high reducing power of this ancient salt water, It is interpreted as what was obtained since it was intercepted with the interspace mind also for tens of thousands of years (oxygen), and light and the metal ion of the Takahara child value was returned to the metal ion of the low valence as a result by the influence of reducing substances, such as an organic matter in salt water, bacteria, etc.

[0028]The ancient salt water which contains a mineral element indispensable to life activity especially calcium, and magnesium with sufficient balance so much this invention, By controlling propagation of microorganisms, such as saprophytic bacteria and bacteria, and blending this as a mineral ingredient paying attention to it being pure and moreover a remarkable reducing action (outstanding reducing power) being shown to the substance of an oxidizing quality, inhibiting the side effects by superfluous ingestion of calcium at the same time it aims at the increase in calcium absorption efficiency -- simultaneous -- superfluous generating and accumulation of active oxygen or activation lipid -- further, It is completed based on the knowledge which obtains the food constituent which can control the freshness fall of food remarkably, which can carry out things and to say, and therefore, this invention, The Alzheimer type dementia, Parkinson's disease resulting from the shortage of a mineral, Diabetes mellitus, arteriosclerosis, cardiopathy, hypertension, cerebral infarction, ischemic heart disease, the cerebral hemorrhage, Prevention of osteoporosis, a headache, stress, urolith, arrhythmia, sudden death, liver disease, etc., It aims at providing the food additive which demonstrates various diseases including the cancer resulting from superfluous generating of active oxygen, etc., and an effect remarkable to control of a freshness fall according to oxidation of food further and the foodstuffs using this, and a drink.

[0029]

[Means for Solving the Problem]In order to attain this purpose, a food additive in this invention and foodstuffs using this, and a drink blended ancient salt water closed in the underground depths as a mineral ingredient.

[0030]Here, "ancient salt water closed in the underground depths" means salt water which it had underground the external world and under intercepted environment over the long period of time also of tens of thousands of all over a porous layer of underground or a coral reef in a process of complicated diastrophism, such as upheaval sedimentation in ancient times.

[0031]In this invention, a reason for having used such ancient salt water is that this ancient salt water contains a mineral element indispensable to life activity especially calcium, and magnesium with sufficient balance so much like \*\*\*\*.

[0032]Since it was closed in the underground depths, as a result of controlling generating of microorganisms, such as saprophytic bacteria and bacteria, and growth remarkably, ancient salt water is dramatically pure and is compared with other groundwater, sea water, deep sea water, etc., It is because processing of sterilization by boiling, sterilization, etc. is not needed,

so it can obtain cheaply and simple.

[0033]From especially ancient salt water being under mild fixed environment (around 20 \*\*), and it having been in contact with neither oxygen nor light over tens of thousands of years. It is because a remarkable high reducing action (outstanding reducing power) to a substance of an oxidizing quality which a mineral element in the ancient salt water concerned does not oxidize at all, exists with a very activity state, and cannot be obtained in other groundwater, sea water, and deep sea water is shown.

[0034]Since the ancient salt water concerned was closed in the underground depths over the long period of time also of tens of thousands of as for high reducing power of this ancient salt water, It is interpreted as what was obtained since it was intercepted with interspace mind also for tens of thousands of years (oxygen), and light and a metal ion of the Takahara child value was returned to a metal ion of a low valence as a result by influence of reducing substances, such as an organic matter in salt water, bacteria, etc.

[0035]It is characterized by a food additive concerning this invention blending ancient salt water closed in the underground depths as a mineral ingredient, and they are the purposes, such as processing of foodstuffs and a drink or preservation, in a process of manufacture of foodstuffs and a drink, Although it is used for foodstuffs and a drink by addition, mixture, and humid and other methods, Especially as a gestalt of this food additive, it is not what is restricted. For example, adequate amount combination may be carried out at water, sweeteners, an acidulant, a charge of bitter taste, a charge of a taste, a charge of oiliness, etc., and said ancient salt water may be used, It is made to dry, and a thickener etc. may be added, and it supposes that it is powdered, or gel and paste state may be processed, it may be dealt with, and a sex may be raised, and a thing of a state of a fluid as it is or a condensed thing is also contained in said 100% of ancient salt water.

[0036]Although a food additive concerning this invention satisfies people's taste, or prevents deterioration and deterioration of foodstuffs in detail and it is required for manufacture of foodstuffs, quality improvement, maintenance, and fortification, What is necessary is just to process the same gestalt as a known food additive as the processing form, and specifically, for example, a salt solution and salt -- it hangs down and can use as seasonings, such as a rainy season, soup, mirin, or powdered broth, preservatives, an agent for manufacture, a filter aid, a clarifying agent, a coagulant, a keeping improver, a disinfection agent, an antimicrobial agent, or an antiseptic.

[0037]In order to raise quality of a food additive concerning this invention further, in the case of processing to said food additive. It is preferred to carry out under a working condition which cannot touch the open air (oxygen) as much as possible, or a low temperature service, For example, a thing promptly packed so that the activity of mineral ingredients, such as freeze-dry, may be processed under a nitrogen atmosphere and a low temperature service on

conditions not deteriorating and oxygen may not be contacted as much as possible, For example, since sealing can maintain reducing power which was excellent in ancient salt water over a long period of time with a vacuum packing, and nitrogen enclosure or an antioxidant, it is the most desirable.

[0038]And in foodstuffs concerning this invention, it is foodstuffs adding the aforementioned food additive, therefore a mineral ingredient contained in a food additive will be added by foodstuffs of this invention, and, moreover, they will be equipped with outstanding reducing power which detoxicates active oxygen.

[0039]As a gestalt and a kind of foodstuffs in this invention, according to a gestalt of this food additive, Although various foodstuffs, for example, agricultural foods, a livestock product, marine foods, a fermented food, canned food, or instant food is mentioned and it is not restricted in particular, specifically, For example, baked goods, noodles, tofu, dairy products, meat products, soy sauce, bean paste, edible oil and fat, Can mention fats-and-oils processed goods, fishery boiled fish paste, confectionary, processing vegetables, or pickles, and as the concrete addition method, For example, soy sauce processed by mixing and fermenting a salt solution into which ancient salt water was processed in a soybean, wheat, and seed malt, a soybean, rice, bean paste processed by adding and fermenting to wheat salt into which ancient salt water was processed, etc. can be mentioned.

[0040]Tofu which processed ancient salt water as bitter for solidifying soybean milk, and used it, What added said food additive in order to season with a saline taste etc. what was used as salinity for soaking pickles, and other foodstuffs, and a thing which added or immersed said food additive in order to hold freshness of foodstuffs are also contained in foodstuffs of this invention.

[0041]A supplement etc. into which said food additive was processed as health food, such as drinkable preparations, powders, a tablet, and a capsule, are contained.

[0042]As a capsule base filled up with this food additive, Can use conveniently a known capsule base generally used now, and specifically, For example, it encloses with a hard capsule made from gelatin, or the food additive concerned is placed between gelatin bases of two sheets which added glycerin etc. to gelatin and were made flexible, and it puts on a mold, and it squeezes at the time of \*\* and a method etc. which have been enough molded in a globular form or an ellipsoid, and are made into it are mentioned.

[0043]In a drink concerning this invention, it will be characterized by adding the aforementioned food additive, a mineral ingredient contained in a food additive at foodstuffs of this invention will be added, and, moreover, outstanding reducing power which detoxicates active oxygen will be equipped.

[0044]Since it can add to various drinks as a gestalt and a kind of drink concerning this invention according to a gestalt of a food additive, it is not what is restricted especially, A



health drink or a soft drink using reducing power which was excellent in fancy drinks, such as alcoholic beverages, such as Japanese sake, synthetic sake, white distilled liquor, beer, whiskey, liqueur, or fruit wine, fruit juice (juice), concentration refrigeration fruit juice, a nectar, a soda pop, a cola drink, kind tea, coffee, and tea, and ancient salt water, etc. is mentioned.